

WHAT IS CLAIMED IS:

1. A vacuum control system for controlling the rotatory power of a DC brushless motor, continuously controlling displacement of a vacuum pump, and thus keeping the degree of vacuum in a vacuum vessel constant, by decompressing the inside of the vacuum vessel using an exhaust vacuum pump which operates with the DC brushless motor, monitoring the inside pressure of the vacuum vessel using a pressure sensor, and controlling a voltage applied to the DC brushless motor on the basis of an output signal resulting from measurement of the inside pressure of the vacuum vessel by the pressure sensor.

2. The vacuum control system according to Claim 1, wherein air introduction means for continuously introducing a very small amount of air into a vacuum exhaust path is provided on the way of the vacuum exhaust path connecting the vacuum vessel to the exhaust vacuum pump.

3. A constant circulation resistance tube which is formed by coaxially inserting a resistance adjusting rod into a hollow capillary and which can control a flow rate of gas circulating between the inner circumference of the hollow capillary and the outer circumference of the resistance adjusting rod by adjusting a circulation resistance of the gas, wherein the circulation resistance can be adjusted by varying an insertion length of the resistance adjusting rod

inserted into the hollow capillary.

4. The vacuum control system according to Claim 2, wherein the constant circulation resistance tube according to Claim 3 is used as the air introduction means.

5. A vacuum degassing apparatus for removing dissolved gas from liquid isolated with a gas permeation diaphragm by reducing the inside pressure of a vacuum vessel including the gas permeation diaphragm with an exhaust vacuum pump, the vacuum degassing apparatus employing the vacuum control system according to Claim 1.

6. A vacuum degassing apparatus for removing dissolved gas from liquid isolated with a gas permeation diaphragm by reducing the inside pressure of a vacuum vessel including the gas permeation diaphragm with an exhaust vacuum pump, the vacuum degassing apparatus employing the vacuum control system according to Claim 2.

7. A vacuum degassing apparatus for removing dissolved gas from liquid isolated with a gas permeation diaphragm by reducing the inside pressure of a vacuum vessel including the gas permeation diaphragm with an exhaust vacuum pump, the vacuum degassing apparatus employing the vacuum control system according to Claim 4.